StrokeScreen: a Novel Decision-Support Web App in Screening Participants for Stroke Studies

Fatai Akemokwe MBBS[1], Supreeth Gowda MBBS[1], Divya Menghani MBBS[1], Kevin O'Connor MD[1]
[1]*Department of Neurology, University of Kentucky*

BACKGROUND

- Clinical trials are essential for advancing our knowledge of stroke.
- The Department of Neurology at the University of Kentucky (UK) is involved in several multicenter stroke studies with potentially overlapping and conflicting eligibility criteria complicating the screening process.
- Manual screening processes can be time-consuming and error-prone.
- We have developed a web app as part of the ongoing Stroke Trials and Research Opportunities at KEntucky (STROKE) quality improvement project aimed at facilitating screening and recruitment of potential study participants.

OBJECTIVES

- To assess the utility of a novel web app in promoting screening and recruitment of participants into stroke studies

METHODS

- The StrokeScreen web app (available at https://bit.ly/strokescreen) is a single-page application built using the React Javascript library and hosted on GitHub Pages.
- Using a few common key exclusion criteria, the app can determine if a potential participant is ineligible for all current studies, thereby minimizing time and data required for screening.

METHODS (continued)

- Otherwise, it prompts the user for more data, returns a list of studies for which the patient is eligible, and provides the contact information of respective study liaisons. The app does not require any protected health information and does not store data.
- The number of patients screened over time will be estimated via Google Analytics by measuring the number of app "Submit" button clicks.
- Information about the app was disseminated via the residents' WhatsApp group, group emails, flyers, and targeted weekly text messages.
- The number of patients screened over time was assessed using Google
- Residents were surveyed in August 2023 using an anonymous, confidential online questionnaire to assess awareness and utilization of the app.

RESULTS

- Between January 2023 to December 2023, only 30 stroke patients were screened with the app.
- There were 11 responses to the online survey. Nearly all respondents (90.9%) had not screened any patients for stroke trial eligibility.
- Most respondents (63.6%) reported time constraints as their primary impediment to screening patients.
- Less than half of respondents (45.5%) reported being aware of the StrokeScreen App. Only one respondent had used it during their latest Stroke rotation.
- Respondents suggested providing protected time (63.6%) and stroke trials education (18.2%) to improve the screening process.

CONCLUSIONS

We expect that the StrokeScreen app will be a practical and time-saving tool for improving screening and recruitment of eligible stroke trial participants at UK. By streamlining the screening process, researchers can more efficiently allocate their time and resources, while ensuring accurate participant selection.

REFERENCES

Thadani SR, Weng C, Bigger JT, Ennever JF, Wajngurt D. Electronic screening improves efficiency in clinical trial recruitment. J Am Med Inform Assoc. 2009 Nov-Dec;16(6):869-73.

Mott M, Janis S, Koroshetz WJ. StrokeNet Takes Off: National Institute of Neurological Disorders and Stroke Organizational Update. Stroke. 2016 Mar;47(3):e51-2.